Prioritizing destination attributes for optimal resource allocation: A study of Chinese tourists visiting Britain

Zhibin Lin*
Durham University Business School
Mill Hill Lane
Durham
DH1 3LB
United Kingdom
Email: zhibin.lin@durham.ac.uk
* corresponding author.

Ilias Vlachos
La Rochelle Business School
Groupe Sup de Co La Rochelle
La Rochelle, FR 17024
France
Email: ivlachos@gmail.com

Joseph Ollier
ETH Zürich
Dept. of Management, Technology and Economics
Chair of Technology Marketing
Zürich
WEV J 409
Switzerland
Email: jollier@ethz.ch

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This study assesses the importance, performance and the interrelationships of key destination attributes for marketing managers to prioritize resource allocation. A three-dimensional analysis of Importance-Performance-Impact factors (IPIA), based upon a survey sample of 275 Chinese tourists to Britain and an expert panel interview with 10 destination marketing managers. Data analysis was based upon a mix of multi-criteria decision-making methodologies, the Decision-Making Trial and Evaluation Laboratory (DEMATEL) method and the Analytic Network Process (ANP) method. The framework can be applied for prioritizing resources allocation to improve customer satisfaction in other contexts, such as a sector or a specific business.

Keywords: Resource allocation; Tourist satisfaction; Importance-Performance Analysis; Importance-Performance-Impact Analysis, Multi-Criteria Decision Making; Decision-Making Trial and Evaluation Laboratory (DEMATEL); Analytic Network Process; Chinese tourists; Britain, destination marketing.

Introduction

Understanding the importance and performance of destination attributes enables marketing practitioners to more efficiently direct resources to those attributes which will most enhance tourist satisfaction and loyalty (Hall, O'Mahony, & Gayler, 2017; Jiang et al., 2017). One of the most widely used analytical frameworks for making such decisions is importance-performance analysis (IPA) (Mikulić, Paunović, & Prebežac, 2012). First introduced by Martilla and James (1977), IPA is a simple and useful analytical tool based on a two-dimension matrix. It displays customer evaluations of the importance and performance of the attributes of a given product or service (Corrêa, Tontini, & Silveira, 2007), and classifies attributes into different categories to reflect the hierarchical structure of satisfaction dimensions. Most tourist satisfaction studies make recommendations for improvement actions based solely on the IPA of data collected from tourist surveys (Junio, Kim, & Lee, 2017). This approach has limited validity and reliability (Back & Lee, 2015; Kim, Choi, & Schwartz, 2012), because of the interrelationships between destination attributes, and has limited practical value because resource allocation for tourism services improvement is a complex, multidimensional, decision-making process, which is not taken into account in IPA or tourism satisfaction research in general (Back & Lee, 2015).

To overcome the above limitations, this study extends the two-dimensional IPA analysis to include the attribute impact dimension, by examining the cause-effect relationships among destination attributes. Several modifications of IPA have been proposed in extant literature, such as IPA with Kano's Model or Three-Factor Theory (e.g. Arbore & Busacca, 2011; Kuo, Chen, & Deng, 2012), neural network-based IPA (Mikulić et al., 2012), and impact-range performance and asymmetry analysis (Back & Lee, 2015). Adding the impact dimension allows measurement and visualization of the effects of customer satisfaction help destination policy makers to optimize resource allocation (Back

& Lee, 2015). In this study, we use novel and integrated the multi-criterial decision-making tools, Decision Making Trial and Evaluation Laboratory (DEMATEL) and Analytic Network Process (ANP). The data are collected from an expert panel.

Applying the approach, we examine Chinese tourist satisfaction with their visit to Britain. In recent years, the flux of Chinese tourism growth has been described as one of the most important sources of tourists for destinations around the world (Fu, Cai, & Lehto, 2017; Lai, Li, & Harrill, 2013), and it has remained the world's number one tourism source market since 2012 (UNWTO, 2016). According to VisitBritain, the national tourism marketing organization in the UK, the number of Chinese tourists visiting Britain has increased by 33% and Chinese tourist spending increased by 48% in the first nine months of 2017. Chinese travelers in the UK spend an average of £1972 per visit, three times more than the market average.

In this study, Chinese tourist satisfaction factors were based upon three-factor theory (Matzler et al., 2004), a review of relevant literature, and a survey of a sample of 275 Chinese tourists who had recently completed their visit in Britain. Chinese tourists' perceptions of attribute performance were also obtained from the same survey. The data for determining the impact of each attribute was obtained from an expert panel, which consists 10 destination marketing managers.

This paper attempts to make three major contributions. First, it assesses the perceived importance of destination factors and ranks them hierarchically for Chinese tourists visiting Britain. Second, it makes use of a combination of destination attributes highlighted by industry leaders and practitioners from their experiences with Chinese tourists. This contribution is significant as previous research neglects this dimension.

Third, using a hybrid, advanced analytical tool (DEMATEL + ANP), it examines the impact of these destination factors and their interrelationships on the complex and multi-faceted nature of destination attributes, and how they affect one another.

Literature review

Outbound Chinese tourists

Within tourism research there has been an array of perspectives as to motivating factors for outbound travel (Li et al., 2013). Chinese tourists have been found to share many typical reactions/interpretations to tourism phenomena based on sensory, affective, cognitive or behavioral elements (Chang, Kivela, & Mak, 2010; Pearce et al., 2013; Román & Martín, 2016). Yet even within culturally similar nations there can be clear differences in motivators and behavior (Wong & Lau, 2001).

For Chinese tourists their own culture has been found to influence outbound travel in various ways. The collectivist nature of Chinese culture has often been shown in formulating motives for outbound travel. For example, in Sparks and Pan (2009) study of Australia as a Chinese tourist destination, they highlighted the importance of reference groups in generating the need to make purchases in overseas destinations. Xu and McGehee (2012) confirmed the importance of reference groups by studying the US and tourist shopping behaviors, with foreign brands bought at a discounted price used as a cue to associate higher status home with the tourist (Chang et al., 2010; Mok & DeFranco, 2000).

The originality and novelty in making purchases of authentic/native goods further motivates Chinese outbound tourists (European Commission Tourism Business Portal, 2014). The importance of novelty has been confirmed by studies in various countries such as in New Zealand (Mohsin, 2008) and Singapore (Kau & Lim, 2005). In a recent study of Chinese tourists in Australia, Ma, Ooi, and Hardy (2018) indicated that Chinese outbound travelers usually do not make sufficient pre-travel search or adequate travel plans, and they have limited local knowledge and limited travel time. Furthermore, they encounter difficulties such as language and cultural barriers, and are unable to find suitable dining

options, for example. These factors lead to their anxiety during their visit of overseas destinations.

Countries that have managed to differentiate themselves as a destination are able to accentuate their differentness positively in the eyes of Chinese tourists (Kau & Lim, 2005). It is not only important to communicate destination value appropriately, but it is equally important countries to create memorable, pleasurable or relaxed atmosphere across various destination attributes (Jiang, Scott, & Ding, 2014; Mohsin, 2008).

Importance and performance of destination attributes

Destination can be seen as a combination of benefits to tourists and a fundamental sum of all experiences tourists share whilst on holiday (Žabkar, Brenčič, & Dmitrović, 2010). As a fundamental part of overall image, destination attributes are critical in understanding the success of a tourist destination (Echtner & Ritchie, 1993), affecting pre and post destination evaluation (O'Leary & Deegan, 2005). Composite of both tangible and psychological elements (Echtner & Ritchie, 1993), destination attributes include experiential elements such as local culture, refreshment, meaningfulness, knowledge, novelty and hedonism (Kim, 2014) with the most pleasant of these transferring to positive quality perceptions of a location's destination attributes (Albayrak & Caber, 2015; Kim, 2014).

Tourist perceptions of destination attributes are reliant on two dimensions in their evaluation, namely; the importance of attributes as well as their performance (Brito & Pratas, 2015). Used regularly in tourism research (Wong & Wan, 2013), the Expectancy Disconfirmation Paradigm (EDP) posits that customers are satisfied when quality attribute's performance meets or exceeds expectations, and are dissatisfied when it is lower than expectations (Lai & Hitchcock, 2016). Tourist satisfaction is a function of both

expectations and performance of destination attributes (O'Leary & Deegan, 2005). Understanding the importance and performance of destination attributes enables practitioners to more efficiently direct resources to those attributes which will most enhance customer satisfaction (Albayrak & Caber, 2015).

There are several models depicting the hierarchical structure of satisfaction dimensions by classifying attributes into different categories, one of which is the Kano Model (Arbore & Busacca, 2011; Deng, 2007; Kano et al., 1984; Kuo et al., 2012). The Kano Model identifies the critical factors associated with performance that generate customer satisfaction (Chen, 2012). Drawing on the Kano Model, Matzler et al. (2004) indicate that attributes can be classified into three categories according to their relationship with overall customer satisfaction, i.e. basic factors, performance factors and excitement factors. Various empirical studies have reported that integrating Kano model or the 'three-factor theory' with a revised IPA is superior to conventional models that have not considered the non-linear effects (Arbore & Busacca, 2011; Deng, 2007; Kuo et al., 2012; Lai & Hitchcock, 2016).

Three factor model

The IPA is based on the assumption of linear relationships between attributes performance and importance, which in reality are non-linear, i.e. there are causal relationships among the attributes (Arbore & Busacca, 2011; Kuo et al., 2012). To solve this issue, we first follow Matzler et al. (2004) by grouping destination attributes into basic factors, performance factors and excitement factors, based on a review of the literature on Chinese tourist experiences with international destinations. The three-factor theory is built on an early model proposed by Kano et al. (1984), which solves the non-linear, asymmetric relationships between attribute performance and importance of customer satisfaction.

Basic factors

Basic factors are those that are necessary but not sufficient for generating customer satisfaction. If these factors do not meet requirements, customers will be dissatisfied, but if they do meet or exceed requirements, customers may not have a great impact on customer satisfaction.

One of such basic factors is safety and security (Cang et al., 2017; Lee, Jeon, & Kim, 2011; Li et al., 2011; Pearce et al., 2013; Sparks & Pan, 2009; Wong & Lau, 2001). A study of Chinese tourists visiting the US showed that crime and safety issues were a prevalent anxiety amongst respondents, cultivating negative attitudes which contaminated evaluations of other destination attributes (Lai et al., 2013).

Food is another basic factor which has found to be important as an experiential part of a holiday experience for Chinese tourists (Wong & Lau, 2001). In Li and colleagues' (2011) study of long-haul Chinese tourists, it was found that local food may satisfy Chinese tourists' experiential needs as a novel experience, but not sufficiently their "physiological needs". Once these basic needs are not met, they can cause general negative attitudes and evaluations of other areas of their vacation-stay in general. Chang et al. (2010) have suggested this barrier to enjoyment can be removed by modifying local food to become acceptable.

Performance factors

Performance factors are those factors that have relatively linear and symmetric relationship with customer satisfaction, in other words, the higher the performance, the higher customer satisfaction (Matzler et al., 2004)..

Performance factors such as friendliness and service standard have similarly been highlighted as important destination attributes for Chinese tourists. This could be attributed

to their cultural background, i.e. Confucian values of politeness with regard to strangers (Li & Cai, 2012). Alternatively, this could be due to the occasional cultural misunderstandings or faux paus between Chinese tourists and host nations (Agrusa, Kim, & Wang, 2011), so that where good relationships occur, Chinese tourists particularly value them. A concrete example of this was identified by Xu and McGehee (2012) whereby the care and good service of a store clerk left a deeply personal positive impression on the Chinese tourist with the USA as a destination and created a glow of satisfaction that shone across evaluations of other areas of the vacation-stay. Alternatively to this, in Italy as the destination market, Pearce et al. (2013) found that excessive rubbish/garbage as well as "unsmiling service personnel" were found to be negatively evaluated destination attributes by respondents, whom expected a more professional service from a Western country. Attributes perhaps desired due to their links to symbolic prestige in visiting an overseas destination (Chang et al., 2010; Mok & DeFranco, 2000).

Excitement factors

Excitement factors when performed to a high standard have the strongest impact on customer satisfaction.. Typically, for Chinese tourists visiting Western country destinations, shopping has been a popular factor in assessing a destination. Besides this, variation from home culture, or cultures seen as similar to China have been rated as positive destination attributes. Kim, Guo, and Agrusa (2005) found Mainland Chinese respondents appreciated the different historical and cultural resources in their home nation, and this translated into searching for unique history/culture in overseas destinations, such as Australia, Germany and Egypt. However contrary to this, Singapore has been ranked poorly by Chinese tourists, due to a lack of activities when compared with their home cities, and a lack of distinctive culture (Kau & Lim, 2005). Lee et al. (2011) provide

further support that the natural environment, well-equipped tourism facilities, different cultural/historical resources are primary factors in creating excitement through novelty.

In understanding destination attribute performance, it is important to highlight the role of lifestyle and market segments (Füller & Matzler, 2008) and psychosocial and cultural tendencies causing variability in destination attribute perception (Albayrak & Caber, 2015). Füller and Matzler (2008) identified several performance factors for a ski resort that differed based on lifestyle factors of visitors. Albarak & Caber (2015) found shopping to be a basic factor for British and Russian tourists but a performance factor for Germans.

Based on the extant literature to date on Chinese tourists, we expect similar complex relationships to take place in this study. For example, Lai and Hitchcock (2016) found that when comparing stand-alone and resort-based luxury hotels, many basic factors for stand-alone luxury hotels (e.g. staff communication) became performance factors for the more premium resort-based luxury hotels. Personality traits have been linked to Chinese tourists' openness to try new foods (Li et al., 2011) or holiday activities (Li et al., 2013), for example. Demographic factors also hold sway, such as independence whilst travelling (Lee et al., 2011), or anxiety surrounding safety, with older Chinese tourists more likely to rate it as a concern (Li et al., 2013).

Table 1 summarizes the key destination attributes from Chinese tourists' perspective based on the three-factor-theory.

[Table 1 about here]

Data and Method

In this study, we propose adding "Impact" dimension of the attributes to the existing IPA model, hence the Importance-Performance-Impact Analysis (IPIA). "Impact" refers to the extent that an attribute influences the performance of other attributes. The IPIA takes the following steps:

Step 1. Determine attribute structure by reviewing relevant literature. This was the focus of the previous section.

Step 2. Measure and normalize the Importance and Performance of attributes through customer survey and regression analysis.

Step 3. Measure and normalize the Impact of each attributes through expert-manager panel interview and DEMATEL+ ANP analysis.

Step 4. Determine resource allocation using the IPIA matrix.

Data collection (for Step 2 analysis in the IPIA Model)

Data for Importance and Performance measurement were collected from a tourist survey. Questions in the questionnaire assessed the variables in the three-factor theory (Table 1). An 11-point scale was used to evaluate each attribute (from 0 indicating 'very poor' to 10 indicating 'excellent').

The tourist survey was facilitated by a UK-based tour operator with expertise in Chinese tourists visiting Britain. The tour agent was preferred since most Chinese tourists join a tour organized through a similar tour operator. Three hundred questionnaires were distributed, and 275 were received, a response rate of 91.7%. High response rates may not obviate non-response bias, thus early and late responders were compared, and no

significant differences were found. Survey participants were asked to rate their perception regarding the service attributes of Britain as tourist destination.

Data for Impact measurement were collected from interviews with destination marketing managers. The expert panel was recruited through the same tour operator used in the tourist survey. The panel consisted of ten managers responsible for designing and organizing trips. Participants were asked to make pair-wise comparisons of the ten attributes on a matrix table based on an 11 point rating scale (Hu et al., 2011; Hu et al., 2009). Pair-wise comparisons were then analyzed using DEMATEL and ANP.

Importance & Performance: Regression Analysis (Step 2 of the IPIA Model)

The tourist survey measured 11 destination attributes according to the three-factor theory: a) basic factors: hotel accommodation, safety and security, food and drink; b) performance factors: friendliness, service standard, environment cleanness; and c) excitement factors: entertainment facilities, shopping experience, architecture, historic/heritage sites, and natural environment.

Hierarchical regression analysis produced the beta weights between destination attributes and customer satisfaction, ran in 3 steps it produced 3 subsequent models: a) The control model that included only the control variables (sex, age, income, education, length of stay, number of visits, and information channel); b) The independent model that included the control variables and the destination attribute variables; and c) the interaction model that included all variables of the Independent model plus all interactions among the destination attribute variables. The standardized beta values of the Independent model were used as measures of Importance dimension in IPIA analysis. The standardized beta coefficient expresses the significance or importance of the independent variable in terms of standard deviation units and specifically, the number of standard deviations the dependent

variable increases or decreases with a one standard deviation increase in the independent variable.

The mean values of destination attributes measured the Performance dimension in IPIA analysis.

Impact Analysis: DEMATEL & ANP (Step 3 of the IPIA Model)

The decision-making trial and evaluation laboratory (DEMATEL) method facilitates the decision analysis of complex and intractable problems. Most Multiple-Attribute Decision Making (MADM) methods assume that attributes are independent of each other, which is not a realistic assumption (Gölcük & Baykasoğlu, 2016). The method has been widely applied in a range of studies usually in combination with other Multiple Criteria Decision Making (MCDM) methods, such as Analytic Network Process (ANP) method (e.g. Liu, Tzeng, & Lee, 2012; Tsai, Chou, & Lai, 2010). Hybrid techniques of DEMATEL and ANP are increasingly used in the literature to solve real-life, complex problems (Gölcük & Baykasoğlu, 2016).

DEMATEL models the cause and effect relationships between attributes (Fontela & Gabus, 1976; Hu et al., 2011; Tsai et al., 2010). ANP takes the output from DEMATEL to produce a multidimensional ranking of attributes (Saaty, 1980). ANP assumes that the network structure among attributes is known a priori, which is not the case in most real-life scenarios. By taking the DEMATEL cause and effect relationships as an input, ANP overcomes this assumption and reliably handles both inner and outer dependence (Yang et al., 2008). The hybrid model of DEMATEL and ANP is particularly suitable for overcoming the shortcomings of conventional IPA where the structure and relation between attributes are defined a priori (Yang et al., 2008).

IPIA Matrix (Step 4 of the IPIA Model)

After calculating the Importance-Performance-Impact relationships, data is presented in the IPIA table and depicted in the IPIA Matrix. To construct the IPIA Matrix, values were normalized within the minimum and maximum values of Performance and Importance dimensions. Resource allocation for optimal customer satisfaction can be determined based the IPIA matrix, thus completing Step 4 of the IPIA Model.

Findings

Importance and Performance of destination attributes

Table 2 presents the mean, standard deviation, and correlation between destination attributes on overall satisfaction. Mean values of destination attributes measure the Performance of each attribute. The highest values were in natural environment (μ=9.015, σ= 1.190), architecture (μ=8.891, σ=1.285), environment cleanness (μ=8.81, σ= 1.46), safety and security (μ=8.61, σ= 1.54) and the lowest in food and drink (μ=7.327, σ= 1.769), entertainment facilities (μ=7.719, σ= 1.913), and hotel accommodation (μ=7.887, σ= 1.769).

[Table 2 about here]

The beta weights, presented in Table 3 suggest that destination attributes significantly influence the overall satisfaction. The control model that included the variables (sex, age, income, education, length of stay, number of visits, and information channel) had a low statistical power to predict overall satisfaction ($\Delta R = .078$, $p<.01$; $F=3.223$, $p<.01$), however, when the attributes were entered in the independent model, the change in adjusted R square value was significantly higher ($\Delta R=.317$, $p<.001$; $F=9.283$, $p<.001$). This means that 31.7% of overall satisfaction was influenced by the destination attributes. The change in the interaction model was also significant but with a lower value of 0. 187, $p<.01$ ($F=3.834$, $p<.01$).

[Table 3 about here]

Natural environment ($\beta=0.14$, $p<.1$) and service standard ($\beta=0.13$, $p<.001$) contribute most to predicting overall satisfaction followed by friendliness ($\beta=0.11$,

p<.001). Historic/heritage sites (β=0.08, p<.1) and entertainment facilities (β=0.06, p<.1) showed lower beta values and thusly lower contribution to overall satisfaction. The following factors had lowered beta scores: environment cleanness (β=0.08), architecture (β=0.07), hotel accommodation (β=0.07), shopping experience (β=0.06), safety and security (β=0.03), and food and drink (β=0.03).

Impact of destination attributes

DEMATEL was applied to construct the structure and to analyze the interdependent relationships of eleven destination attributes. The prominences and relations between techniques are reflected by the sums of influences and provided in Table 4. There are significant interactive relationships between all attributes since all measures are non-zero. Table 4 shows that Britain's destination attributes for Chinese tourists with higher prominence coefficients are: hotel accommodation (Basic factor, D+R = 6.99), friendliness (performance factor, D+R = 6.91), and entertainment facilities (excitement factor, D+R = 6.78).

[Table 4 about here]

According to the dynamic influence relationship obtained through DEMATEL, an unweighted supermatrix is constructed using an ANP algorithm. Then, a weighted supermatrix is established based on the degree of influence of each dimension. Subsequently, a limited supermatrix is composed by taking into account the weight of each factor (overall weight. Finally, the priorities of Britain's destination attributes were established as presented in Table 5. Among the eleven attributes, the following factors were ranked highly: safety and security (basic factor), hotel accommodation (basic factor), food and drink (basic factor), environment cleanness (performance factor), and friendliness (performance factor).

[Table 5 about here]

IPIA Analysis

The IPIA Table presents the weights of Performance, Importance and Impact (Table 6). Figure 1 depicts the IPIA Matrix. Natural environment and environment cleanness have high performance and importance for Chinese tourists, indicating that resources are well managed, impact is neither high nor low. Both natural environment and environment cleanness need to maintain high performance levels. Safety and security also performs highly but in this case the impact is also high, which indicates that a considerable amount of resources are required to maintain high performance levels. However, the importance of safety and security is low as reported by Chinese tourists. Natural environment, environment cleanness, safety & security, and architecture were the only indicators with high performance.

[Table 6 about here]

[Figure 1 about here]

Historic/heritage sites, service standard, shopping experience, and friendliness had moderate performance with varying degrees of importance and impact. Chinese tourists regarded historic/heritage sites as of high performance, as well as service standard, but their impact is low and average respectively. Britain has a well-maintained stock of historic/heritage sites which, in comparison to new attractions like the London Eye, are relatively cost-effective to maintain. Architecture was similar to historic/heritage sites but with a higher performance. However, performance does not mean importance. Service standard was similar to historic/heritage sites, regarding performance and importance but getting these higher levels of performance requires more input resources. Chinese tourists reported a low importance in shopping experience, which can be interpreted in the context

of other attributes being more important than this one in Britain. Shopping experience has a low impact and thusly there exists a balance between importance and impact that produces acceptable performance levels. Friendliness is similar to shopping experience but has a higher impact. Food and drink, hotel accommodation, and entertainment facilities scored low in performance. Language and cultural barriers can explain the low performance here. The importance of these three attributes is also average (hotel accommodation, entertainment facilities) or low (food and drink). The impact of hotel accommodation is high indicating a low productivity of resources and that importance is not addressed in an efficient manner. The impact of food and drink is also high, but low in entertainment facilities where performance improvement is needed.

Impact was high in all basic factors (safety and security, hotel accommodation, and food and drink). This indicates that high emphasis has been given to basic factors overlooking excitement and performance factors. Almost all excitement factors, except natural environment, had low impact, and the performance factors had an average impact. This evidence confirms that experts follow the three-factor theory when they manage the destination attributes, however, Chinese tourists visiting Britain put different weight on their importance and rate their performance differently. This finding has significant theoretical and managerial implications, as discussed in the next section.

Discussion

The findings of the study provide specific recommendations for UK destination marketing organizations. We organize our suggestions into three groups: a) keep up the good work; b) need improvement; and c) reallocate resources elsewhere if possible.

First, attributes located in the "keep up the good work" group include: natural environment, cleanness, safety and security, and friendliness.

Natural environment: In present-day China, concerns about the environment dominate many areas of the country and thus logically having an un-spoilt natural environment was well received. In her study of wildlife tourism, Curtin (2009) found that the natural environment can instill feelings of well-being, spiritual fulfillment and psychological health benefits. With Chinese highly rating the natural environment in previous studies (Li et al., 2011), our findings again highlight this important factor, which had a moderate impact and thusly no need of additional resource inlay.

British landscapes differ greatly from China, so we once again see the importance of novelty for Chinese tourists as in other studies (Chang et al., 2010; Wong & Lau, 2001). To maximize the benefit felt from the natural environment, we recommend practitioners allow Chinese tourists ample time and opportunity to view and photograph these landscapes, as a "prized activity" (Pearce et al., 2013) and part of the "Chinese tourist gaze" (Li, Sharpley, & Gammon, 2017).This enables Chinese tourists to reap maximum satisfaction, by both enjoying the landscapes physically, as well as also taking symbols/tokens of these landscapes to share amongst their social networks as a status boosting activity (Sparks & Pan, 2009; Wong & Lau, 2001)..

Cleanness of the environment: the ratings of this attribute are similar to those of natural environment, high importance and performance with an average impact.

Considering this attribute is a performance factor, which suggests the better the performance the more satisfied customer will be, managers can maintain the current level of performance. However, if surplus resources become available destinations could improve this further to generate maximum customer satisfaction, as a study of Italy suggested that Chinese tourists expect high standards of Western nations, particularly in cleanness (Pearce et al., 2013).

*Safety and security**:*** the performance far exceeds customer expectation, but this is a basic factor with high impact on other attributes. Therefore, managers are advised to keep up the good work. This attribute will require constant vigilance for managers, and best practice would be to continually re-assure both current and potential customers, as tourists' concerns can often be misplaced or irrational and in need of addressing (Lai et al., 2013). So far however, British destinations seem to be performing well.

Friendliness: Again, this attribute outperforms customer expectation, while the impact is average. As it is a performance factor, It is well received by visitors. Given that this factor does not overly consume resources, we suggest maintaining the good work. Friendliness, personability (Pearce et al., 2013) and the value of harmony from a Confucian perspective are extremely valued by the Chinese tourist (Mok & DeFranco, 2000). Destinations therefore do not need to allocate additional resources, but if choosing to, additional language training may deliver even better performance (Xu & McGehee, 2012) as found in British retail stores in London whom have made such an investment (Chow & Murphy, 2008).

Second, attributes that "need improvement" are: hotel accommodation, food and drink, entertainment facility, service standard, historic/heritage sites. Priority for resource investment should on the improvement of the hospitality services (hotel, food and drink).

Hotel accommodation (average importance, low performance, high impact): Hotel accommodation was found lacking by Chinese tourists. This may reflect the mismatch of services between British hotels and what Chinese tourists expect based on their home market (Li et al., 2011); including personal items such as slippers, toothbrushes and toothpaste which are commonly found at 3 star Chinese hotels but may not be in Britain (Wang et al., 2008). Personal items and other services have a significant resource impact in British hotels. Expectancy disconfirmation (Wong & Wan, 2013) also includes Comfort on holiday, which depends on the provision of such personal items to enable an hotel room to serve as a base of normality to venture forth and return to (Li et al., 2011).

Food and drink (low importance, low performance, high impact): For Chinese tourists, food is composite of the dual properties of a staple requirement, fulfilling physiological needs, as well as a confirmation that destination contains experiential and entertainment qualities (Chang et al., 2010). For best practice, we encourage British destinations to be mindful of these two different purposes of dining and aim to provide an array of dishes which can satisfy both aspects. Chinese tourists have been identified as open to trying new foods (Chang et al., 2010). Therefore, Chinese tourists could be first brought several smaller British dishes which can be shared amongst the group, fulfilling experiential aspects of food consumption, and encouraging socialization/discussions, before being given a traditional Chinese meal for physiological aspects. Dependent on the nature of the tourists, younger or more experimental tourists may also benefit from a culinary tour to direct them to new dishes they may enjoy eating. This may well prove a fruitful avenue, given the variability of groups whom take tour trips to foreign nations (Li et al., 2011).

Entertainment facilities (average importance, low performance, low impact): Previous research into UK hotels has highlighted that the location of British hotels, often away from the city center deprives Chinese tourists of the chance to explore and shop at

their own leisure (Wang et al., 2008). This situation is further compounded by early closing hours, which do not replicate China's convenience (Wang et al., 2008). Trapped in the hotel, with no Chinese language entertainment facilities it is perhaps unsurprising this had low performance. Therefore, British and European destinations in general would do well to modify how resources are spent for Chinese tourists; practitioners in industry should provide some same-language entertainment, and governments can promote more suitable locations, kitted out for Chinese tourists specifically. If resources are invested, Britain would do well to unique position British culture into their facilities, as previous research has shown Chinese express displeasure at generic entertainment facilities (Kau & Lim, 2005). Doing this could enable Britain to follow Australia's example of a high-value for money destination, which has been designed for with the inbound Chinese tourism market specifically in mind (Agrusa et al., 2011; Kau & Lim, 2005).

Service standard (high importance, average performance, average impact): Chinese tourists exhibit a strong preference for uncertainty avoidance (Lee et al., 2011). Yet often Chinese tourists visiting Britain will be visiting somewhere unfamiliar to them, with limited ability to request items, and desiring home comforts or tastes, for example hot drinking water (Li et al., 2011). Therefore, service personnel who pre-empt Chinese tourists needs, or respond promptly to requests, are likely to exceed expectations, whilst maintaining Confucian group "harmony" through mitigating chances of conflict (Mok & DeFranco, 2000).

There are an array of cultural etiquette or rituals as part of services in China, for example waiters waiting on hand to pour drinks and clear tables (Wang et al., 2008) or the famous tea ritual (Cheng et al., 2010). Following actor-network theory as applied in tourism (van der Duim, Ren, & Thór Jóhannesson, 2013), interactions between actors form a "creative" tourism allowing important criteria such as "face", "equity", "value", "harmony" (Lee & Sparks, 2007) to play out amongst the individuals during the dining

experience (Li et al., 2011). British dining service generally speaking naturally fulfils these criteria to some extent, hence the moderate performance, however these could be further improved with cultural sensitivity training and awareness which has previously benefited Taiwan in dealing with foreign guests (Gilbert & Tsao, 2000).

Historic and heritage sites (high importance, average performance, low impact): Tourism has been defined as the paradoxical desire for both the novel and the known (Tasci & Knutson, 2004), and this is clear with the Chinese love of global historical sites despite having many of their own. Britain, with its huge array of historical destinations, from ancient sites such as Stonehenge or Hadrian's Wall, to medieval castles, renaissance palaces, museums and much more should be performing well in the eyes of Chinese consumers. However, thus far is not making full use of its heritage resources. Chinese tourists value information in their native language (Pearce et al., 2013), and well-written signs, audio-tours or Chinese-speaking personnel can help connect with tourists..

Finally, there are opportunities for prioritizing resources allocation to high impact attributes from low impact attributes such as: shopping experiences and architecture.

Shopping experience: The performance of this attribute exceeds customer satisfaction, and it has low impact. This could reflect that the British shopping experience mirrors Chinese preferences against crowded spaces, pressurizing sales personnel, and time constraints whilst shopping (Pearce et al., 2013). Likewise, Chinese tourists are known to "buy status" whilst shopping (Xu & McGehee, 2012), and Britain's overall destination status as an economically developed country, home to many designer brands, means that little is needed to further improve the shopping experience for tourists.

Architecture: Similar to shopping experience, the architecture attribute outperforms customer expectations, and because its impact is low, there is opportunity for resources reallocation to other attributes that need improvement. Chinese consumers commonly

receive images of a tourist destination through television (Sparks & Pan, 2009), and it is likely their impressions of British architecture/historical buildings when viewing them through television were lessened than when viewing them in real life. Therefore, besides maintenance of this resource to ensure no architectural degradation, resources can be allocated elsewhere due to superior performance.

Conclusions

This study contributes to the travel and tourism literature by identifying a framework of important attributes from the Chinese tourists' perspective and their perceptions of the attributes' performance from their visiting experience. The results reveal for the first time that for Chinese tourists, the destination attributes of natural environment (excitement factors), safety and security (basic factors), historic/heritage cities (excitement factors), and architecture (excitement factors) are cause factors, influencing their perceptions of the remaining destination attributes, including all the performance factors and a mix of excitement and basic factors as classified based on the three-factor model.

This is the first study that uses IPIA analysis in tourism research. Findings imply that "Impact" should be considered following the "Importance and Performance Analysis". IPIA analysis is useful to uncover inconsistencies and unfold managerial assumptions. The study contributes to the literature by providing new insights how resources can be optimally allocated for improving Chinese tourists' overall satisfaction.

The insights to both the importance and performance of key destination attributes of Britain gained from this study are limited to Chinese tourist satisfaction. The tourist sample was limited to packaged holiday makers of a particular tour operator, and further research could explore samples from other segments of tourists. There are inherent limitations to the use of an expert panel which includes small sample size, subjectivity and limited representativeness. Future research could adopt IPIA framework to examine customer groups in tourism industries or a specific business such as an airlines, hotel, restaurant or tourist attraction.

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Tables and figures

Table 1. Three-factor categorization of destination attributes from Chinese tourists' perspective

Basic factors	Hotel accommodation Safety and security Food and drink
Performance factors	Friendliness Service standard Environment cleanness
Excitement factors	Entertainment facility Shopping experience Architecture Historic/heritage sites Natural environment

Table 2 Means, standard deviation (SD), and correlation between destination attributes on overall satisfaction

Variables / Correlations	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Sex	62.2%		1.00	-0.03	-0.04	0.07	-0.00	0.05	-0.01	0.02	0.07	.137*	0.11	0.11	.119*	0.08	0.09	0.10	0.09	.183**
2. Age	3.564	1.192	-0.03	1.00	-0.01	-0.08	-.144*	0.01	0.06	0.02	0.05	0.10	-0.01	-0.04	-0.09	-0.04	0.04	0.10	0.08	0.04
3. Income	13.255	20.995	-0.04	-0.01	1.00	0.03	.200**	-0.00	0.03	0.02	-0.01	0.02	-0.04	0.05	-0.05	-0.01	-0.03	0.01	-0.03	-0.04
4. Education	3.236	2.367	0.07	-0.08	0.03	1.00	0.05	-0.00	-0.04	0.02	0.01	-0.04	-0.11	-0.04	-0.04	-0.10	-0.07	-0.05	-.177**	0.01
5. Length of stay	30	101	-0.00	-.144*	.200**	0.05	1.00	-0.08	.140*	-0.04	-.134*	-.145*	-.142*	-0.10	-0.09	-0.06	-0.02	-0.06	-0.06	-0.08
6. Number of Visits	1.429	1.086	0.05	0.01	-0.00	-0.00	-0.08	1.00	.199**	.224**	.204**	.175**	.141*	.143*	.144*	.159**	.141*	.155**	.190**	.148*
7. Information channel	3.964	1.713	-0.01	0.06	0.03	-0.04	.140*	.199**	1.00	.127*	.139*	0.03	0.07	0.12	.125*	.123*	0.08	0.03	.151*	0.08
8. Natural environment	9.015	1.190	0.02	0.02	0.02	0.02	-0.04	.224**	.127*	1.00	.736**	.491**	.369**	.432**	.467**	.337**	.406**	.434**	.400**	.483**
9.Architecture	8.891	1.285	0.07	0.05	-0.01	0.01	-.134*	.204**	.139*	.736**	1.00	.643**	.448**	.547**	.486**	.445**	.510**	.512**	.529**	.588**
10.Historic/heritage sites	8.556	1.598	.137*	0.10	0.02	-0.04	-.145*	.175**	0.03	.491**	.643**	1.00	.515**	.496**	.445**	.432**	.474**	.536**	.529**	.535**
11.Food and drink	7.327	2.053	0.11	-0.01	-0.04	-0.11	-.142*	.141*	0.07	.369**	.448**	.515**	1.00	.633**	.525**	.526**	.480**	.501**	.451**	.459**
12.Hotel accommodation	7.887	1.769	0.11	-0.04	0.05	-0.04	-0.10	.143*	0.12	.432**	.547**	.496**	.633**	1.00	.639**	.585**	.554**	.486**	.452**	.540**
13.Shopping experience	8.065	1.595	.119*	-0.09	-0.05	-0.04	-0.09	.144*	.125*	.467**	.486**	.445**	.525**	.639**	1.00	.626**	.561**	.502**	.379**	.548**
14.Entertainment facility	7.719	1.913	0.08	-0.04	-0.01	-0.10	-0.06	.159**	.123*	.337**	.445**	.432**	.526**	.585**	.626**	1.00	.501**	.488**	.431**	.491**
5.Service standard	8.49	1.50	0.09	0.04	-0.03	-0.07	-0.02	.141*	0.08	.406**	.510**	.474**	.480**	.554**	.561**	.501**	1.00	.766**	.587**	.596**
16.Friendliness	8.53	1.62	0.10	0.10	0.01	-0.05	-0.06	.155**	0.03	.434**	.512**	.536**	.501**	.486**	.502**	.488**	.766**	1.00	.661**	.673**
17.Safety and security	8.61	1.54	0.09	0.08	-0.03	-.177**	-0.06	.190**	.151*	.400**	.529**	.529**	.451**	.452**	.379**	.431**	.587**	.661**	1.00	.712**
18.Environment cleanness	8.81	1.46	.183**	0.04	-0.04	0.01	-0.08	.148*	0.08	.483**	.588**	.535**	.459**	.540**	.548**	.491**	.596**	.673**	.712**	1.00

Note: **Sex is nominal and Mean is the male %. Age is scale for 1-6 (1=below 20, 2=20-29, 3=30-39, 4=40-49, 5=50-59, 6=60 and above) and education in scale of 1-4 (1=below secondary school, 2=secondary school, 3=bachelor degree, 4=postgraduate degree and above).**

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table 3 Hierarchical regression results of destination attributes on overall satisfaction

Variables	Overall satisfaction		
	Step 1	**Step 2**	**Step 3**
Control variables			
Sex	0.45 3.50***	0.29 2.68**	0.30 2.56*
Age	0.03 0.74	0.03 0.76	0.07 1.49
Income	0.00 0.28	0.00 0.10	0.00 0.32
Education	0.00 0.32	0.02 0.97	-0.02 -0.65
Length of stay	0.00 0.25	0.00 1.49	0.00 1.33
Number of Visits	0.13 2.26*	0.02 0.56	0.06 1.25
Information channel	0.04 1.30	0.00 0.09	-0.00 -0.01
Destination attributes			
Natural environment (F1)		0.14 2.09*	-1.17 -1.96*
Architecture (F2)		0.07 1.02	0.91 1.22
Historic/heritage sites (F3)		0.08 1.77*	0.45 0.90
Food and drink (F4)		0.03 0.85	-0.53 -1.36
Hotel accommodation (F5)		0.07 1.62	-0.04 -0.08
Shopping experience (F6)		-0.06 -1.34	-0.48 -0.80
Entertainment facility (F7)		0.06 1.82*	0.03 0.07
Service standard		0.13 2.28*	0.30 0.47
Friendliness (F9)		-0.11 -1.94*	0.71 0.91
Safety and security (F10)		0.03 0.56	0.39 0.49
Environment cleanness (F11)		0.08 1.40	0.30 0.38
	***Interactions in* Step 3**		
F1 * F2	-0.00 -0.11	F4 * F6	-0.00 -0.33
F1 * F3	-0.04 -0.59	F4 * F7	0.02 0.48
F1 * F4	0.00 0.06	F4 * F8	0.00 0.05
F1 * F5	-0.03 -0.40	F4 * F9	-0.03 -0.75
F1 * F6	0.18 2.21*	F4 * F10	0.03 0.75
F1 * F7	0.03 0.52	F4 * F11	-0.01 -0.28
F1 * F8	0.16 1.71*	F5 * F6	-0.06 -1.20
F1 * F9	-0.15 -1.88*	F5 * F7	0.05 1.19
F1 * F10	-0.02 -0.29	F5 * F8	0.01 0.46
F1 * F11	0.04 0.40	F5 * F9	-0.04 -0.95
F2 * F3	0.02 0.36	F5 * F10	-0.05 -1.00
F2 * F4	0.04 0.62	F5 * F11	0.13 2.41*
F2 * F5	0.11 1.39	F6 * F7	0.00 0.05
F2 * F6	-0.20 -2.19*	F6 * F8	-0.03 -1.00
F2 * F7	0.03 0.43	F6 * F9	-0.02 -0.46
F2 * F8	-0.04 -0.44	F6 * F10	-9.13 -0.00
F2 * F9	-0.00 -0.07	F6 * F11	-0.04 -0.81
F2 * F10	-0.08 -0.88	F7 * F8	0.02 0.44
F2 * F11	0.04 0.54	F7 * F9	0.06 1.41
F3 * F4	0.08 2.28*	F7 * F10	0.01 0.33
F3 * F5	-0.16 -3.46***	F7 * F11	-0.00 -0.00
F3 * F6	0.07 1.58	F8 * F9	-0.15 -2.29*
F3 * F7	0.00 0.23	F8 * F10	-0.00 -0.10
F3 * F8	-0.13 -2.31*	F8 * F11	0.19 2.55*
F3 * F10	0.08 1.27	F9 * F10	-0.16 -2.08*
F3 * F11	-0.03 -0.62	F9 * F11	-0.14 -2.03*
F4 * F5	0.06 1.11	F9 * F10	0.14 1.75*
		F10 * F11	-0.01 -0.27
	Step 1	**Step 2**	**Step 3**
F Value	3.223**	9.283***	3.834**
Adjusted R^2	0.053	0.353	0.431
ΔR^2	0.078**	0.317***	0.187**

Notes: Standardized regression coefficients are reported. Within cells, first row figure is beta coefficients and second row the t-test values, significant at: *p <0 .10, **p <0.01, ***p <0.001

Table 4. DEMATEL Prominence and Relation of destination attributes

Category	Attributes	D	R	D+R *Prominence*	D-R *Relation*
Basic factors	Hotel accommodation	3.32	3.67	6.99	-0.34
Performance factors	Friendliness	2.32	4.59	6.91	-2.27
Excitement factors	Entertainment facility	2.37	4.41	6.78	-2.03
Excitement factors	Shopping experience	2.42	4.31	6.73	-1.89
Performance factors	Environment cleanness	2.40	4.31	6.71	-1.91
Basic factors	Food and drink	2.85	3.78	6.63	-0.93
Excitement factors	Architecture	4.28	2.03	6.31	2.25
Performance factors	Service standard	1.47	4.71	6.18	-3.24
Excitement factors	Historic/heritage sites	4.59	1.55	6.14	3.04
Basic factors	Safety and security	4.90	1.15	6.06	3.75
Excitement factors	Natural environment	4.73	1.16	5.89	3.58

Table 5 Priorities of Britain's Destination Attributes

Group	Variable	Normalized By Cluster	Limiting	Ranking
Basic factors	Safety and security	0.380	0.139	1
Basic factors	Hotel accommodation	0.316	0.116	2
Basic factors	Food and drink	0.304	0.111	3
Performance factors	Environment cleanness	0.346	0.093	4
Performance factors	Friendliness	0.339	0.091	5
Performance factors	Service standard	0.314	0.084	6
Basic factors	Nature	0.223	0.081	7
Excitement factors	Historic/heritage sites	0.217	0.079	8
Excitement factors	Architecture	0.203	0.074	9
Excitement factors	Shopping experience	0.180	0.066	10
Excitement factors	Entertainment facility	0.177	0.065	11

Table 6- IPIA Table

Destination Attributes	**Factor category**	**Importance**		**Performance**		**Impact**		**Recommendations**
Natural environment	Excitement	0.14	High	9.015	High	0.081	Average	Keep up the good work!
Environment cleanness	Performance	0.08	High	8.81	High	0.093	Average	Keep up the good work!
Safety and security	Basic	0.03	Low	8.61	High	0.139	High	Keep up the good work!
Architecture	Excitement	0.07	Average	8.891	High	0.074	Low	Keep up the good work, resource reduction possible.
Historic/heritage sites	Excitement	0.08	High	8.556	Average	0.079	Low	Needs improvement.
Service standard	Performance	0.13	High	8.49	Average	0.084	Average	Needs improvement.
Shopping experience	Excitement	-0.06	Low	8.065	Average	0.066	Low	Resource reduction possible.
Friendliness	Performance	-0.11	Low	8.53	Average	0.091	Average	Resource reduction possible
Hotel accommodation	Basic	0.07	Average	7.887	Low	0.116	High	Needs improvement, high priority.
Entertainment facility	Excitement	0.06	Average	7.719	Low	0.065	Low	Needs improvement, low priority
Food and drink	Basic	0.03	Low	7.327	Low	0.111	High	Needs improvement, moderate priority

Note: Performance values are the μ values from Table 2. Importance values are the beta regression values from Table 3. Impact is the limiting values from Table 4

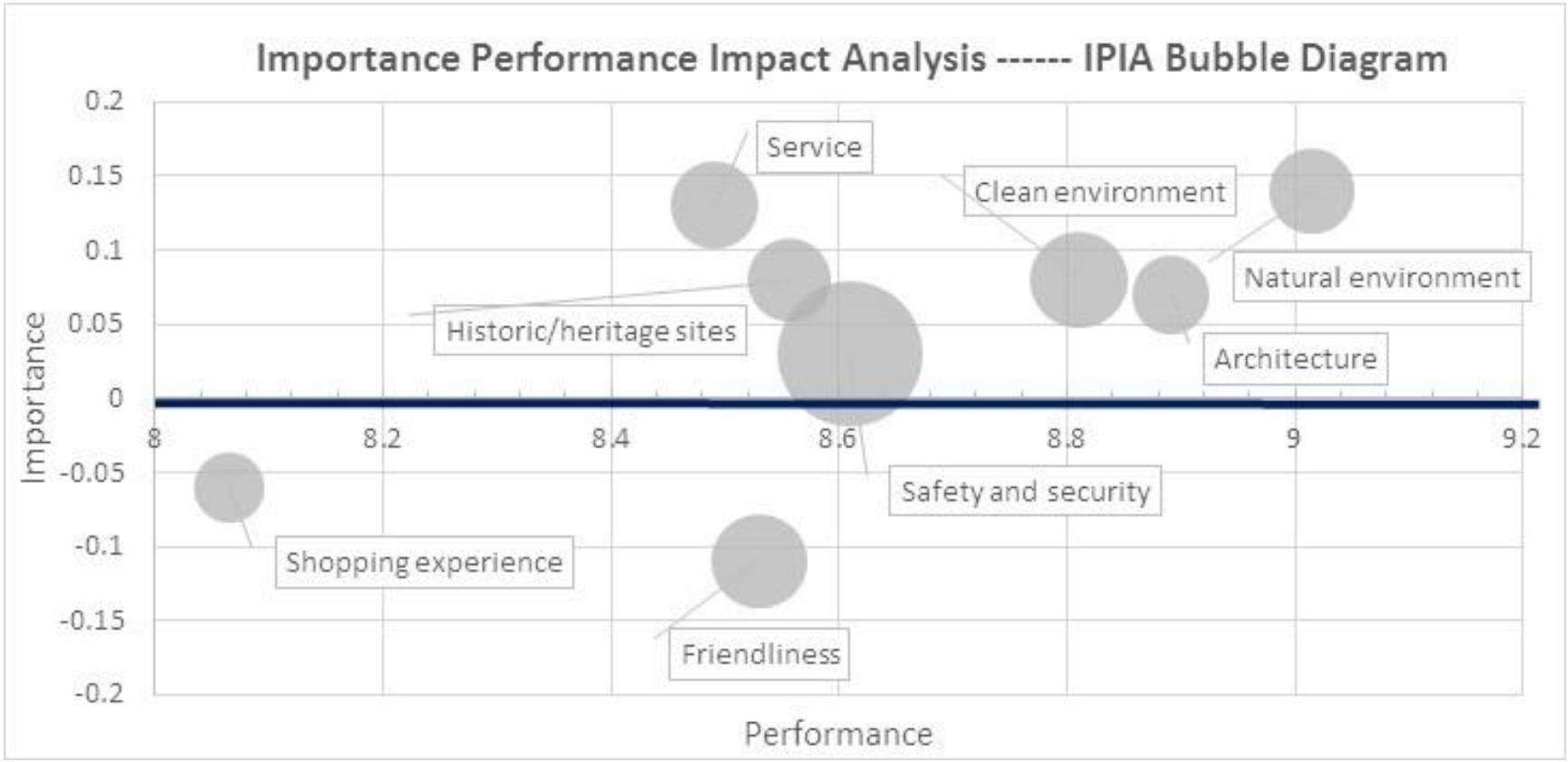

Figure 1 IPIA Matrix

Note: Bubble size denotes impact.